

and pharmacy/IV therapy services (\$9,484). Average cost per patient in all categories at 1-year post-AIS increased significantly from the pre-admission period. Diagnostic/lab services expenditures increased \$20,225; pharmacy/IV therapy services increased \$6,864; and outpatient visits increased \$2,484; all p -values < 0.001. Compared to the overall AIS patients, the early readmitted patients experienced higher resource utilization and expenditures. **CONCLUSIONS:** Economic burden of Medicare AIS patients is substantial. Resource utilization and direct costs were highest during the first 30 days of AIS hospitalization and doubles in the first year. Costs significantly increased in the year following stroke compared to the pre-admission year.

PCV84

THE TOTAL DIRECT HEALTHCARE COST OF AORTIC AND MITRAL VALVULAR DISEASE: EVIDENCE FROM US NATIONAL SURVEY DATA

Rizzo JA¹, Chen J², Mallow PJ³, Moore M⁴

¹Stony Brook University, Stony Brook, NY, USA, ²University of Maryland, College Park, NY, USA,

³CTI Clinical Trial and Consulting Services, Cincinnati, OH, USA, ⁴Edwards Lifesciences, Inc., Irvine, CA, USA

OBJECTIVES: This study quantified the total direct healthcare costs of aortic and mitral valvular disease to insurers and patients, stratified by asymptomatic and symptomatic disease status. **METHODS:** Using 1996-2011 data from the Medical Expenditure Panel Survey (MEPS), a large, nationally-representative database from the US, this study performed descriptive analyses of the total annual healthcare costs to insurers and patients for aortic and mitral valve disease. The healthcare costs were reported at the individual and US aggregate levels. Individuals with aortic and mitral valve disease were identified by International Classification of Disease Codes, 9th revision and stratified as either symptomatic or asymptomatic based on the presence of comorbid conditions. **RESULTS:** The MEPS database included 148 patients with aortic disease and 1,057 with mitral valve disease. Asymptomatic patients comprised 64% and 70% of the population for aortic disease and mitral valve disease, respectively. Symptomatic aortic disease patients incurred higher overall annual healthcare direct costs per patient compared to asymptomatic patients (\$30,146 vs. \$16,065). Symptomatic mitral valve disease patients incurred greater annual healthcare costs per patient compared to asymptomatic patients (\$14,054 vs. \$7,198). Because these were direct costs, the majority of the healthcare expenditures were borne by the insurer (range 79% to 90% based on type of disease and symptom status) rather than the patient. When aggregated to the US population, the overall annual direct cost was \$4.5 billion and \$10 billion for aortic disease and mitral valve disease, respectively. Approximately 75% and 52% of the total annual direct cost was attributed to symptomatic aortic valve and mitral valve disease patients, respectively. **CONCLUSIONS:** These findings indicate that the total direct healthcare costs of valvular disease are quite large. Symptomatic patients incur disproportionately greater healthcare costs, possibly due to costly surgical interventions required to treat their valvular disease.

CARDIOVASCULAR DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PCV85

PERSISTENCE AND COMPLIANCE WITH LIPID- LOWERING DRUGS IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Truong VT, Moisan J, Kröger E, Langlois S, Grogire J

Laval University, Quebec, QC, Canada

OBJECTIVES: Among individuals suffering from chronic kidney disease (CKD) newly treated with lipid-lowering drugs (LLD): (1) to estimate persistence with LLD one year after treatment initiation; (2) among those persisting, to estimate compliance in the year following LLD initiation; (3) to identify factors associated with persistence and with compliance. **METHODS:** Using Quebec administrative databases we carried out a cohort study of individuals aged ≥ 18 who had started a LLD between January 1, 2000 and December 31, 2011. Individuals still undergoing treatment with any LLD one year after their first claim were considered persistent. Of these, we considered compliant those with a supply of drugs for $\geq 80\%$ of days. We identified factors associated with persistence and with compliance using modified Poisson regression. **RESULTS:** Among 14,607 eligible individuals, 80.7% were persistent and 88.7% of these were compliant with their LLD. Individuals with low (Prevalence ratio: 1.03; 95%CI: 1.01-1.06) and medium socioeconomic status (SES) (1.04; 1.02-1.05) compared with those with high SES, treated by a nephrologist (vs. general practitioner) (1.06; 1.04-1.09), who had hypertension (1.04; 1.02-1.06), diabetes (1.04; 1.03-1.06), stroke (1.09; 1.07-1.12) or coronary disease (1.07; 1.05-1.09) were more likely to be persistent. Individuals more likely to be compliant were aged ≥ 66 (vs. 18-65) (1.04; 1.01-1.07), had low (vs. high) SES (1.08; 1.06-1.10), and had ≥ 12 (vs. <7) distinct drugs (1.03; 1.0-1.05), had been hospitalized (1.04; 1.02-1.06) or had stroke (1.04; 1.03-1.06) in the year prior to LLD treatment initiation. **CONCLUSIONS:** One year after LLD initiation, 28% of individuals with CKD were either no longer taking their treatment or had not been compliant to it. Results could help target individuals who need help to better manage their LLD treatment.

PCV86

INERTIA OR ACTUAL SWITCHING ON MEDICATION ADHERENCE AND ECONOMIC WELL-BEING OF MEDICARE BENEFICIARIES ENROLLED IN PART D PLANS

Basu R

Baylor Scott & White Health, Temple, TX, USA

OBJECTIVES: It is not well understood the relative impacts of switching (from brand name drug to generic drug or plan switching) and consumer inertia on medication non-adherence and economic well-being for individuals with at least four most common chronic conditions: diabetes, hypertension, heart disease and psychiatric problem. The goal of the current study is to examine the whether switching decision or consumer inertia impact medication adherence and/or economic well-being of

older adults **METHODS:** Medicare beneficiaries participated in the 2007 HRS prescription drug survey and 2009 HRS well-being survey and enrolled in Medicare part D (stand-alone), HMO, fee-for service or Advantage plans. The study sample includes 773 individuals with at least one of four common chronic health conditions and responded both years. Random intercept logit model was estimated for medication non-adherence and population based generalized estimating equation was utilized to examine poverty-adjusted well-being (excluding out-of-pocket medical expenditure from poverty threshold) **RESULTS:** Preliminary results indicate that individuals having inertia in plan switching were 3.4 times more likely to be non-adherent to regular prescription medications compared to those without inertia (odds ratio estimate, 3.4 with $p < 0.001$). Neither switching from brand name drug to generic drug plan nor plan level switching appeared to be a significant predictor of medication non-adherence or economic well-being in this group. **CONCLUSIONS:** Consumer inertia rather switching decision appears to be a significant factor influencing medication non-adherence among individuals with four common chronic health conditions

PCV87

COMPLIANCE AND CONTROL OF HYPERTENSION WITH CO-MORBIDITIES IN PRIMARY CARE IN UKRAINE

Korzh O

Kharkov Medical Academy of Postgraduate Education, Kharkov, Ukraine

OBJECTIVES: The aim of this study was to evaluate adherence of family doctors to National Clinical Practice Guideline (2012) in the management of hypertension with co-morbidities in Ukraine. **METHODS:** Cross-sectional study was done at a primary care network in Ukraine. Total 62 physicians and 1550 patients' prescriptions written by same physicians (25 prescriptions per physician) were analyzed. All patients had hypertension with co-morbidities. Depending on the recommendations of National Clinical Practice Guideline (2012), the prescriptions were clustered as compliant and non-compliant prescriptions. All obtained data were analyzed using descriptive and inferential statistics. **RESULTS:** A statistically significant negative association ($r = -0.089$, $p = 0.005$) was observed between hypertension control and co-morbidities. Compliant patients had statistically weak negative association ($r = -0.078$, $p = 0.015$) with patients having co-morbidities (38.2%). No statistically significant association was observed between guideline adherence and any other co-morbidity. Majority of the patients received guidelines-compliant pharmacotherapy. The overall good level of physician compliance with National Clinical Practice Guideline (2012) was observed in the management of hypertension with co-morbidities. **CONCLUSIONS:** The study explored several features of prescription pattern of the primary care physicians involved in the management of hypertension with co-morbidities and recognized the need for improvement in their prescription pattern for treating the hypertension.

PCV88

COMPARING THE EQ-5D-3L AND SF-6D UTILITY SCORES OF ACUTE CORONARY SYNDROME PATIENTS FROM AN ASIAN POPULATION

Azmi S¹, Anchah L², Goh A¹, Fong A³

¹Azmi Burhani Consulting, Petaling Jaya, Malaysia, ²Sarawak General Hospital Heart Centre,

Kuching, Malaysia, ³Sarawak General Hospital, Kuching, Malaysia

OBJECTIVES: EQ-5D and SF-6D can both be used to derive health utility scores. Variations in utility scores can have a major impact on the results of cost-utility studies. This study aimed to compare the health utility of acute coronary syndrome (ACS) patients from Malaysia measured by the two descriptive systems **METHODS:** Data was obtained from an earlier study. The study collected data from ACS patients admitted to the Sarawak General Hospital who consented to the study. Validated language versions of the EQ-5D-3L and SF-36v1 were administered during admission and 12-months post-admission. Health utility scores were calculated using the Malaysian EQ-5D-3L utility tariff and Brazier SF-6D algorithm. Patient demographic and clinical data were extracted from medical records. **RESULTS:** Data from 100 of 112 subjects were usable for analysis. Mean age of patients was 56.3 years and 88% were male. Utility scores measured by EQ-5D were higher than those measured by SF-6D. Mean utility scores from EQ-5D and SF-6D during admission were 0.75 and 0.56 ($p < 0.0001$). 0.82 and 0.79 ($p = 0.0521$) 12 months post-admission, respectively. Improvement in utility scores from baseline to 12 months was statistically significant for both EQ-5D (0.06, $p = 0.0300$) and SF-6D (0.23, $p < 0.001$). EQ-5D and SF-6D utilities were moderately correlated at 12 months ($r = 0.68$, $p < 0.0001$) but not during admission ($r = 0.12$, $p = 0.2183$). Ceiling effect was observed in EQ-5D utility scores, whereby 22% and 29% of patients reported the best possible EQ-5D health state during admission and 12 months, respectively. Only 3% recorded the highest SF-6D utility at 12 months. **CONCLUSIONS:** Consistent with past studies, utility scores of ACS patients calculated by EQ-5D (Malaysian value set) and SF-6D (Brazier algorithm) resulted in different utility values, magnitude of change and extent of ceiling effect. Properties of patient reported outcome instruments should also be considered when selection utility measures for cost-effectiveness studies.

PCV89

HEALTH UTILITIES OF HYPERTENSIVE PATIENTS IN VIETNAM

Nguyen TP, CCM S, Postma MJ

Groningen University, Groningen, The Netherlands

OBJECTIVES: With a lack of an essential evidence on utilities to support cost-effectiveness analysis of hypertension management in Vietnam, we aimed to gather data on health utilities for hypertensive patients and identify predictors of utility. **METHODS:** Hypertensive patients, from 40 to 80 years old visiting the hospital were invited to take a survey. Short-form 36 version 2 translated into Vietnamese was used to interview patients. We applied a specific published model to measure utilities, that explains a reasonable share of variance, especially in those cases when only relatively small differences in health are expected. **RESULTS:** 712 patients were included in the study. Mean utility of these patients was 0.72 +/- 0.14. Controlling

for age, sex, blood pressure (BP) stage and history of stroke, we found that the utilities in older patients were lower than those of the younger groups, and statistically significantly differing if compared the extremes of youngest and oldest groups were considered ($p=0.03$). Utility in males was higher than in females ($p=0.002$). Patients with a history of stroke exhibited lower utility than patients without such history, although not statistically significant ($p=0.73$). Patients with more than 3 comorbidities had lower utilities than patients without comorbidity ($p=0.01$). Statistically in significantly relatively higher BP was associated with lower utility at 0.734, 0.726 or 0.712 in the groups with target BP, stage 1 and 2, respectively ($p=0.422$). **CONCLUSIONS:** Mean utility was estimated at 0.72 in hypertensive patients in Vietnam. In contrast to BP staging and history of stroke, gender was found as a statistically significant predictor of utility. In addition, patients who experience more than 3 comorbidities or older than 70 had statistically significant lower utilities.

PCV90

DETERMINANTS OF UTILITY BASED ON THE EQ-5D IN CHRONIC HEART FAILURE PATIENTS AND THEIR CHANGE OVER TIME: RESULTS FROM THE SWEDISH HEART FAILURE REGISTRY

Berg J¹, Lindgren P², Mejhert M³, Edner M⁴, Dahlström U⁵, Kahan T⁶

¹Mapi, Stockholm, Sweden, ²IVBAR, Stockholm, Sweden, ³Ersta Hospital, Stockholm, Sweden, ⁴Karolinska Institutet, Stockholm, Sweden, ⁵Linköping University, Linköping, Sweden, ⁶Danderyd Hospital, Stockholm, Sweden

OBJECTIVES: There is limited information on drivers of utilities in patients with chronic heart failure (CHF). We analyzed determinants of utility in CHF and drivers of change over one year in a large sample from clinical practice. **METHODS:** We included 5334 patients from the Swedish Heart Failure Registry with EQ-5D information available following inpatient or outpatient care during 2008 to 2010; 3495 had 1-year follow-up data. We applied ordinary least squares (OLS) and two-part models for utility at inclusion, OLS regression for change over one year, all with robust standard errors. We assessed predictive accuracy of both models using cross-validation. **RESULTS:** Mean age was 73 years, 65% were male, 19% had a left ventricular ejection fraction $\geq 50\%$, 23% 40-49%, 27% 30-39%, and 31% $<30\%$. For both models, utility at inclusion was negatively affected by female gender, increasing age, increasing New York Heart Association (NYHA) class, preserved left ventricular ejection fraction, lung disease, diabetes, and use of nitrates, antiplatelets or diuretics. Higher systolic blood pressure and haemoglobin levels and use of angiotensin converting enzyme inhibitors/angiotensin receptor blockers or beta-blockers were associated with increased utility. A significant interaction between age category and functional class indicated that patients in the youngest age group are more severely affected by worsening functional status than older patients. The OLS model performed slightly better than the two-part model on a population level and for capturing utility ranges. Change in utility over one year was influenced by age, gender, disease duration, and (measured at inclusion) NYHA class, blood pressure, ischemic heart disease, lung disease, angiotensin converting enzyme inhibitors/angiotensin receptor blockers and antiplatelets. **CONCLUSIONS:** Utilities in CHF and their change over time are influenced by diverse demographic and clinical factors. Our findings can be used to target clinical interventions and for economic evaluations of new therapies.

PCV91

VALIDATION OF A SYNDROME-SPECIFIC INSTRUMENT TO ASSESS ANGINA TREATED BY TRADITIONAL CHINESE MEDICINE (TCM-SAQ): THE ABILITY TO DETECT CHANGE

Zhang HY, Yu L, Lv MJ, Chen ZH, Yang GL

Liaoning University of Traditional Chinese Medicine, Shenyang, China

OBJECTIVES: The TCM-SAQ was a valid and reliable syndrome-specific instruction to assess quality of life (QoL) for angina treated by traditional Chinese medicine. However, its ability to detect change has not been discussed. This study was aimed to investigate the ability of detecting change over time of the TCM-SAQ. **METHODS:** The data is performed from an Random Clinical Trial. Patient diagnosed with angina pectoris were enrolled in ten Chinese medical hospitals in the northeast of China, from June, 2011 to May, 2012. All enrolled patients were treated by Chinese herbs combined with aspirin and Lipitor for 8 weeks; nitrates were used to release angina attack. Angina symptoms (frequency, duration, pain degree) were used to assess the therapeutic efficiency; lower scores represent better angina conditions. TCM-SAQ was tested at the enrollment and 8th weeks of the treatment, higher scores means better quality of life. **RESULTS:** Analysis is based on 240 patients (age 60 ± 7 years; 111 male, 52%). The disease history is 3.5 ± 3.5 years. Seventy-nine (32.9%) patients have at least one comorbidity. The average angina attack times per week before the treatment is 6.28, and 2.36 after eight weeks' treatment, which declined 3.97 times; the average angina attack duration is 5.73 before, and 2.56 after, and angina score declined 4.1 after the treatment. TCM-SAQ shows a significant improved of QoL in each domain as well as the angina condition changes ($P=0.000$). Of all those patients, 64 patient's (26.7%) angina condition remained unchanged, and 176 (73.3%) improved. Therapeutic effective patients show a better QoL than invalid patients. TCM-SAQ can detect the differences between effective and invalid patients in domains ($p=0.000$). **CONCLUSIONS:** The TCM-SAQ has a good ability to detect clinical change over time in individuals, and it also can detect the differences between known groups. In the future, we need to determine the minimal clinic differences of TCM-SAQ.

PCV92

TRAJECTORIES OF ANGINA HEALTH-RELATED QUALITY OF LIFE AFTER ACUTE CORONARY SYNDROME IN TRACE-CORE

Nobell L¹, Tjia J², Saczynski J¹, Waring ME¹, Anatchkova MD¹, Ware J¹, Ash AS¹, Kiefe CI¹, Allison JJ¹

¹University of Massachusetts Medical School, Worcester, MA, USA, ²University of Massachusetts Medical School, Worcester, MA, USA

OBJECTIVES: Despite the American Heart Association's interest in research on the determinants of health-related quality of life (HRQoL) among Acute Coronary Syndrome (ACS) survivors, little is known about trajectories of HRQoL post-ACS. We sought to identify such longitudinal patterns, and their predictors, over the 6 months post-ACS discharge. **METHODS:** We used data from the Transitions, Risks, and Actions in Coronary Events – Center for Cardiovascular Outcomes and Education (TRACE-CORE) prospective cohort of patients hospitalized with ACS. HRQoL was measured using the Seattle Angina Questionnaire (SAQ) at the index hospitalization and at 1-, 3-, and 6-months post-discharge. The quality of life subscore of the SAQ ranges 1-100 with higher scores indicating better HRQoL. We used trajectory analysis to identify subgroups of patients with distinctive 6-month post-discharge HRQoL patterns, and predictors of different trajectories. **RESULTS:** Participants ($N=920$) had mean age 63 (SD 11) years, 34% were female, and 83% non-Hispanic white. We identified 3 HRQoL trajectories (FAIR, GOOD, and EXCELLENT HRQoL) consisting of 12.1%, 53.8% and 34.1% of participants, respectively: FAIR (baseline average HRQoL = 38.8, and remaining low over the 6-month follow-up); GOOD (baseline average = 62.6 and increasing modestly over time); and, EXCELLENT (baseline average = 87.0 and remaining high). With FAIR HRQoL as the referent, we found that older age predicted better HRQoL (OR per year for GOOD = 1.09 and for EXCELLENT = 1.18) as did non-Hispanic white race/ethnicity (OR for GOOD = 3.01; for EXCELLENT = 4.21) and male sex (OR for GOOD = 1.17 $p=0.56$, for EXCELLENT = 2.57). [All $p < 0.05$, except as noted.] **CONCLUSIONS:** On average, HRQoL was relatively stable over time, and no trajectories with decreasing HRQoL were found. Early HRQoL scores could direct resources to improve HRQoL over the first 6 months post-ACS.

CARDIOVASCULAR DISORDERS – Health Care Use & Policy Studies

PCV93

IMPLEMENTATION OF THE AMERICAN DIABETES ASSOCIATION'S STANDARDS OF MEDICAL CARE: THE CASE OF STATIN UTILIZATION IN THE ELDERLY WITH DIABETES

Li M, Lu K, Maxwell WD, Schulz RM

University of South Carolina, Columbia, SC, USA

OBJECTIVES: Since 2005, the American Diabetes Association's (ADA's) Standards of Medical Care in Diabetes have recommended that elderly diabetic patients with overt cardiovascular disease (CVD) or CVD risk factors should take statins to manage lipid levels. The objectives of this study were to 1) provide national estimates of statin utilization, and 2) identify predictors of statin use in elderly Medicare beneficiaries with diabetes to whom the ADA's Standards of Medical Care apply. **METHODS:** This study was a pooled cross-sectional study of the Medicare Current Beneficiaries Survey (MCBS) from 2006 to 2010. Sampling weights were applied to generate national estimates. Weighted logistic regression was performed to identify predictors of statin use. **RESULTS:** Among 8,539 person-years of elderly diabetic patients, 8,115 (94.69%, weighted percentage) were eligible for statin therapy according to the ADA's Standards of Medical Care. In 2006, 2007, 2008, 2009, and 2010, 55.27%, 53.30%, 53.23%, 57.86%, and 60.70% of eligible diabetics used statins, respectively. Predictors of non-use of statin included: being non-Hispanic black (odds ratio [OR]: 0.69; 95% confidence interval [CI]: 0.56-0.84), living in non-metropolitan areas (OR: 0.78; 95% CI: 0.69-0.88), being underweight, with a body mass index of 18.5 or under, (OR: 0.27; 95% CI: 0.13-0.54), having one or more comorbidities in addition to CVD (OR: 0.81; 95% CI: 0.68-0.95), and having CVD risk factors (OR: 0.59; 95% CI: 0.51-0.67). **CONCLUSIONS:** A 10% increase in statin use was observed among diabetic patients who satisfied ADA's criteria for statin use between 2006 and 2010. Still, approximately 40% of eligible individuals with diabetes were not taking statins in 2010. For elderly Medicare beneficiaries with diabetes, healthcare providers should be aware of patient factors associated with statin non-use and provide interventions to improve prescribing patterns and patient adherence.

PCV94

PATIENTS IN THE WAITING LIST OF BARIATRIC SURGERY IN THE BRAZILIAN PUBLIC SECTOR TREATMENT PATTERNS AND HEALTH OUTCOMES: A NON-INTERVENTIONAL SINGLE-SITE RETROSPECTIVE STUDY

Junqueira Junior SM¹, Luque A¹, Cabra HA², Andrade PC¹, Oliveira FM¹, Brasil N¹, Rasera I³

¹Johnson & Johnson Medical Brazil, Sao Paulo, Brazil, ²Johnson & Johnson Medical, Mexico city, Mexico, ³Clinica Bariátrica, São Paulo, Brazil

BACKGROUND: Obesity is a chronic condition and its clinical and economic consequences are very concerning. Obesity and its co-morbidities were associated with USD 2.1 billion annually costs in the Brazilian Public Health System. According to a National Survey there are 22 million people in Brazil with BMI $>30\text{kg/m}^2$. Also there are 13.5 million diabetic people, many of them being obese. **OBJECTIVES:** To describe epidemiology, treatment patterns, resource use and associated costs of morbid obese patients in the list, waiting to receive surgical treatment for surgery in order to quantify the clinic and economic burden of not providing surgical treatment to eligible patients. **METHODS:** Non-interventional, single center, retrospective cohort with medical chart review of 300 patients who met eligibility criteria, having their registry data extracted and outcomes followed-up for up to 12-months post-bariatric-surgery. **RESULTS:** The mean time in the waiting list was 751.76 days. BMI mean at baseline was 46.53 kg/m^2 (95% CI 45.67-47.39); 43.78 kg/m^2 (95% CI 42.98-44.59) at surgery and 30.91 kg/m^2 (95% CI 30.29-31.55) at 12-months follow-up. 195 (65%) of patients presented hypertension at baseline, which 92.8% presented improvement/resolution 12-months after surgery. 70 (23.3%) presented dyslipidemia, with resolution of 94.3% after 12-months. 55 (18.33%) presented diabetes, with resolution of 94.3% after 12-months. 37 (12.33%) patients increased BMI during the wait list, these patients presented lower comorbidities resolution rates compared to patients who maintained or reduced their BMI in the wait list. **CONCLUSIONS:** Analysis demonstrated high comorbidities resolution rates after 12 months of follow